



A Fairfax County, Va.,
publication
September 2011

CONTENTS

| | |
|----------------|---|
| Flood Maps | 1 |
| Floodplains | 2 |
| Flood Safety | 3 |
| Flood Proofing | 3 |
| Drainage | 4 |
| Improvements | 4 |
| Insurance | 5 |
| Warning System | 6 |
| Local Hazards | 7 |
| Dam Safety | 7 |
| Permits | 8 |

On Sept. 17, 2010,
FEMA updated the
flood hazard
information maps for
Fairfax County to
digital format.



The Stormwater
Management Program
Fairfax County,
Virginia

703-324-5500,
TTY 711

Flood Protection Information

National Flood Insurance Program and Revised FEMA Maps

This flood protection newsletter is sent annually to property owners and residents who are in or near areas subject to flooding.

The Federal Emergency Management Agency (FEMA) updated the county's Flood Insurance Rate Maps (FIRMs) and created new Digital Flood Insurance Rate Maps (DFIRMs), both of which were effective on Sept. 17, 2010. These maps show the Special Flood Hazard Areas (SFHAs) in Fairfax County. The land area covered by floodwaters is the SFHA.

The county notified property owners and residents of these changes by letter in early July 2010.

To determine if a property is in or out of a Special Flood Hazard Area, visit the [My Neighborhood website](http://www.fairfaxcounty.gov/gisapps/myneighborhood/default.aspx) at www.fairfaxcounty.gov/gisapps/myneighborhood/default.aspx or the [FEMA Flood Insurance Rate Maps web page](http://www.fema.gov/hazard/map/firm.shtm) at www.fema.gov/hazard/map/firm.shtm or call 1-877-FEMA-MAP (1-877-336-2627).

Owners whose properties have been removed from a SFHA, or whose properties are located in moderate-to-low-risk areas, may obtain a preferred risk flood insurance policy (PRP) with significantly lower premiums through the National Flood Insurance Program (NFIP). Private insurance carriers may assist their customers in obtaining this insurance. More information is available at the [National Flood Insurance Program website](http://floodsmart.gov/floodsmart/pages/about/nfip_partnership.jsp), floodsmart.gov/floodsmart/pages/about/nfip_partnership.jsp.

Some FEMA Letters of Map Amendments (LOMAs) were superseded on Sept. 17, 2010, by the revised DFIRMs, and were not recertified by FEMA. A LOMA determines if a property is in or out of a SFHA.

If the LOMA on a property was not recertified, that property is in the SFHA and the respective property owner is required to purchase flood insurance for structures with federally backed mortgages.

The owners of properties that were not in a SFHA prior to Sept. 17, 2010, but were found to be in a SFHA when the new DFIRMs were adopted, may purchase flood insurance under FEMA's 'grandfather' rules and apply for a preferred risk policy (PRP).

These rules allow property owners to purchase a PRP based on the Flood Insurance Rate Map in effect before Sept. 17, 2010. FEMA extended its deadline on the 'grandfather' rules and there may be an additional opportunity to obtain a PRP at this time.

Further information about Special Flood Hazard Areas, and how changes impact properties in Fairfax County, is available by calling the Stormwater Planning Division at 703-324-5500, TTY 711.

For general information about the National Flood Insurance Program and the 'grandfather' rules see the [Fairfax County flood information web page](http://www.fairfaxcounty.gov/dpwes/stormwater/floodinformation.htm) at <http://www.fairfaxcounty.gov/dpwes/stormwater/floodinformation.htm>, or see the [National Flood Insurance Program website](http://www.floodsmart.gov/floodsmart/) at www.floodsmart.gov/floodsmart/.

Natural and Beneficial Functions of Floodplains

Floodplains, stream channels and transitional areas between the floodplain and the surrounding landscape, are major components forming stream valleys. Water, energy, organisms and other materials interact within these natural systems and provide such critical functions as recharging ground-water supplies, maintaining stream flow, cycling nutrients, filtering contaminants from runoff, absorbing floodwaters and maintaining aquatic and terrestrial habitats. A floodplain is a highly variable area adjacent to a stream that is periodically inundated by floodwaters. Over time, stream channels migrate across the valley floor, forming characteristics important to their function.

Floodplains handle flooding and erosion with natural features that provide floodwater storage and conveyance, reduce flood velocities and peaks, and reduce sedimentation in stream channels. Natural controls of flooding and erosion help maintain water quality by filtering pollutants from runoff, processing organic wastes and moderating temperature fluctuations. These natural controls contribute to recharging groundwater by promoting infiltration and refreshing aquifers and by reducing the frequency and duration of low surface flows.

Physical, Chemical and Biological Processes

Floodplains are defined by the physical, chemical and biological processes that shape them. They function as dynamic ecosystems and are self-sustaining when functionally intact. Floodplains in Fairfax County are essential for the growth of plant communities and the wildlife they support. Periodic flooding of floodplains provides sediment and nutrients to sustain plant communities and provides critical habitat for the creatures that live there.

Riparian buffers are the vegetated areas adjacent to streams, lakes, rivers and marshes. Buffers stabilize shorelines and stream banks, prevent erosion, filter pollutants from stormwater runoff and provide habitat for wildlife. Like natural floodplains, buffers help reduce flooding downstream by slowing and absorbing water during rain storms. These functions protect water quality and support stream vitality.

Healthy stream buffers prevent or reduce the migration of pollutants into the stream.

The Human Perspective

Floodplains provide open space, which may restore and enhance forest lands, or be used for recreation and enjoyment of the aesthetic beauty. Floodplains provide areas for scientific study and education and contain such cultural resources as historic or archaeological sites. They can increase the overall quality of life, which is enhanced by transforming floodplains from problem areas into value-added assets.

In Fairfax County, Dyke Marsh is an example of a functioning floodplain. On the west bank of the Potomac River, about 95 miles from the Chesapeake Bay, Dyke Marsh includes 485 acres of tidal marsh, floodplain and swamp forest. It is one of the largest remaining fresh-water tidal wetlands in the area. The marsh features parks, bike paths, boardwalks, open spaces, and wildlife conservation areas for the public to enjoy.

Please do not mow close to stream banks or dump yard waste into streams or buffers.

Huntley Meadows Park, also in Fairfax County, contains 1,425 acres of the Dogue Creek floodplain that provides diverse habitats including wetlands, meadows and mature forest.

Flood Safety

Do Not Drive Through Flood Waters

People may drown in their cars when they drive through flood waters. Many vehicles will float in as little as six inches of water.

Flowing flood water may overturn the vehicle, trapping the passengers inside as the car is swept away.



Do Not Walk Through Flood Waters

- Six inches of moving water may knock an adult off his feet.
- The ground under the water may have collapsed.
- Floodwaters may carry disease-causing bacteria.
- People may be electrocuted in flood waters.

For more information about flood safety, visit [FEMA's Flood Safety Awareness website](http://www.fema.gov/floodawareness) at www.ready.gov/floodawareness.

Plan Ahead!

Before roads in your neighborhood are flooded, particularly in low lying areas, identify alternate routes for your daily or emergency driving trips.

Turn Around Don't Drown!

Flood Proofing and Property Protection Measures

There are several ways to protect a building from flood damage:

1. Re-grade the lot to drain water away from the building. This works best on large lots, if flood waters are not too deep and if changes will not affect other properties.
2. Waterproof walls and install watertight closures over entrance ways. This is not recommended for houses with basements or if flood waters will exceed two feet.
3. Raise the house above flood levels. Flood waters may pass under the house, causing less damage.

Any alteration to a building or land, including re-grading, filling or modifying a sewer line, requires a permit. For information regarding building and site regulations, call Land Development Services at 703-324-1720, TTY 711.

Some houses, including those that are not in a floodplain, may have sewers that back up into the basement during heavy rain. A plug for the basement floor drain or shower drain, or standpipes for these drains, may stop a backup if the water is not too deep. Plugs are available at many hardware and plumbing supply stores. A plumber should be consulted when installing a plug, overhead sewer or back-flow valves.

More information about flood proofing is available at [FEMA's website](http://www.fema.gov/hazard/flood/fl_before.shtm): www.fema.gov/hazard/flood/fl_before.shtm.

Drainage System Maintenance

Residents of Fairfax County can help prevent flooding in their neighborhoods by recycling their trash properly and by keeping storm drains clear.

Anything that is thrown from a vehicle, dropped on a parking lot or dumped into a storm drain is carried by rain or melting snow through the storm drainage system and then to streams and lakes, not to a wastewater treatment plant.

Cigarette butts, plastic and glass bottles, food containers, cans, plastic shopping bags and anything else that is not disposed of properly can flow to the Potomac River and ultimately to the Chesapeake Bay. Litter blocks storm drains, which may cause street flooding, traffic delays and property damage

to homes, vehicles and businesses.



Trash is unsightly; it degrades residential and commercial property values; harms the fish and other wildlife; damages wetlands; and pollutes the Potomac River, a source of drinking water for many Fairfax County residents.



Do not enter man holes, storm drains or culverts for any reason.

These areas are dangerous and must not be entered without personal protection equipment and a permit allowing a certified worker to enter under very strict safety regulations. If a critical item falls into a man hole or storm drain and must be retrieved, call 703-877-2800, TTY 711.

For emergency response, call 9-1-1.



Facilities like the one pictured above are dangerous.

Do not enter.

Floodplain Management Regulations and Substantial Improvement Requirements

Land use and development in Fairfax County is governed by the Comprehensive Plan, the Public Facilities Manual, the County Code and the Virginia Uniform Statewide Building Code. Fairfax County reviews all subdivision, site and grading plans and building permit applications to determine if the land is located in a floodplain.

The goal of floodplain-related requirements is to prevent loss of life and property damage; promote flood safety; preserve wildlife habitats; maintain the natural integrity of streams; protect water quality; and increase groundwater recharge.

The county participates in the National Flood Insurance Program (NFIP). NFIP rules state that if the cost of reconstruction, rehabilitation, additions or other improvements to a building equals or exceeds 50 percent of its market value, then the building must meet the same construction requirements as a new building.

If a residence in a floodplain is damaged to the extent that the cost of repairs equals or exceeds 50 percent of the building's market value (exclusive of the land) before it was damaged, the building must be elevated 18 inches above the base flood elevation.

Buy Flood Insurance Now

The county participates in the National Flood Insurance Program (NFIP) Community Rating System (CRS) sponsored by the Federal Emergency Management Agency. Participation in the CRS is a service for county residents and provides property owners an opportunity to purchase flood insurance for their buildings and contents at discounted rates.

Flood insurance is mandatory for properties located in a Special Flood Hazard Area (SFHA) that are financed with federally

backed mortgages, which includes all loans from banking institutions with deposits guaranteed by the Federal Deposit Insurance Corporation.



During Hurricane Isabel, the New Alexandria/Belle View areas flooded in 2003.

Many homeowners' insurance policies do not cover damage from flooding.

Visit the [National Flood Insurance Program website](http://www.floodsmart.gov) at www.floodsmart.gov or call 1-800-427-2419 for more information about flood insurance.

The average annual flood insurance premium for structures in a SFHA is \$695. Residents save roughly \$104 per policy, per year. Participation in the CRS program saved county residents approximately \$196,000 annually in flood insurance premiums.

Flooding is the most common natural disaster in Virginia. Repairs are expensive. One inch of water in a home or office may cause damage to drywall, baseboards, floor coverings and furniture.

Most homeowners' insurance policies do not cover losses from flooding. Property owners and residents are encouraged to contact their insurance agent to determine the extent of their policy coverage.

- Flooding can occur at any time of year.
- After applying for flood insurance, typically there is a 30-day waiting period before coverage begins.
- Renters can buy flood insurance for personal belongings or business inventory.
- Coverage may include cleanup expenses and repair or replacement of such items as furnaces, water heaters, washers, dryers, air conditioners and freezers.
- Flood insurance benefits do not have to be repaid.
- Flood-related claims may be covered even if a disaster was not declared.
- Flood insurance may cover homes and businesses and protect the property owner's financial security.

The Flood Warning System in Fairfax County

The Community Emergency Alert Network (CEAN) provides emergency information to county residents. CEAN delivers emergency alerts and information during a crisis and provides daily notices about weather and traffic.

Messages are delivered to all devices registered and may include email, cell phones, text pagers, satellite phones and wireless devices. Register for emergency alerts from Fairfax County at [the CEAN website](http://www.fairfaxcounty.gov/CEAN): www.fairfaxcounty.gov/CEAN.

Fairfax County also has these methods to update residents about flooding and other emergencies:

- **NewsWire** (www.fairfaxcounty.gov/news/) is a comprehensive news website that provides information of all types and topics in multiple ways. On NewsWire, all county news is on one web page. View news by topics and locations; choose multiple ways to receive news, such as email updates
- **Email newsletters** (fairfaxcounty.gov/news/email/) and newsletters, more than 40 RSS news feeds, mobile options, social media sites and more; and engage and interact with your government on “Ask Fairfax” chats, social media sites and social voting opportunities.
- **County Website** (www.FairfaxCounty.gov) and a **mobile version of the county site** (<http://m.fairfaxcounty.gov>) are convenient for residents on the go.
- **Social Media Sites** such as the [county’s page on Facebook](https://www.facebook.com/fairfaxcounty) (www.facebook.com/fairfaxcounty), [Twitter](https://twitter.com/fairfaxcounty) ([www.twitter.com/fairfaxcounty](https://twitter.com/fairfaxcounty)), [YouTube](https://www.youtube.com/fairfaxcounty) ([www.youtube.com/fairfaxcounty.gov](https://www.youtube.com/fairfaxcounty)) and [Flickr](https://www.flickr.com/photos/fairfaxcounty) (www.flickr.com/photos/fairfaxcounty).
- **Emergency Information Line** at 703-817-7771, TTY 711.
- **Fairfax County government Channel 16 also online** at www.fairfaxcounty.gov/cable/channel16/asx/live_stream.asx.
- **Call 703-FAIRFAX** (703-324-7329) for day-to-day information and referrals, staffed during normal business hours and during emergency events.
- **Real Simple Syndication (RSS) feeds** are a quick way for residents to sign up to receive news feeds through their RSS readers www.fairfaxcounty.gov/news/rss.
- **Door-to-door contact** as public safety personnel delivers critical life, safety and property protection messages throughout neighborhoods on an as-needed basis.
- **Community meetings** that inform residents of the latest news for their area.
- **Reverse 9-1-1** telephone calls to residents.



Be Prepared - Receive Emergency Alerts

Individuals and business owners are encouraged to sign up for the Fairfax County Community Emergency Alert Network (CEAN).

Traffic and severe weather alerts, among other emergency notices, are sent to the electronic device of your choice.

New users may register their pager, email, BlackBerry, cell phone, smartphone and telephone with voice mail (home or business) at [the CEAN website](http://www.fairfaxcounty.gov/CEAN): www.fairfaxcounty.gov/CEAN

Residents may update their information at the same site.

The Local Flood Hazard

Flooding can occur with little or no warning. There are three main sources of local flood hazards: floodplains, rivers and streams during heavy storms; inadequate overland relief during heavy storms; and tidal surcharges in the lower Potomac River caused by hurricanes, tropical storms and earthquakes.

Some properties may be at higher elevations or have not flooded recently. However, property in a floodplain or in a Special Flood Hazard Area may flood at any time. Several areas of flood hazards are identified on the new Digital Flood Insurance Rate Maps (DFIRMs). The land area covered by floodwaters is the Special Flood Hazard Area on National Flood Insurance Program maps. In general, the SFHAs are labeled as Zone A or Zone AE.

Zone A is subject to inundation by the one-percent-annual-chance flood event generally determined using approximate methodologies. [More details about Zone A](http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/zone_a.shtm) may be seen at www.fema.gov/plan/prevent/floodplain/nfipkeywords/zone_a.shtm.

Zone AE is subject to inundation by the one-percent-annual-chance flood event determined by detailed methodologies; base flood elevations are shown. [More details about Zone AE](http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/zone_ae.shtm) may be seen at www.fema.gov/plan/prevent/floodplain/nfipkeywords/zone_ae.shtm.

Dam Safety in Fairfax County

There are a number of large dams in Fairfax County; some are privately owned and others are owned or maintained by the county. There are many small, man-made ponds or impoundments, some of which include dams as part of the structure.

The state regulated dams owned and maintained by the county are inspected regularly by county engineers. Electronic devices that monitor the potential for flooding have been installed at 18 dam sites and in the Belle View and Huntington communities.

In March 2011, the county installed sensors that record piezometer levels at six dam sites; Mercer, Braddock, Royal, Huntsman, Woodglen and Barton. A piezometer is a small-diameter observation well that allows engineers to measure water levels in the embankments of these dams.



Construction at Lake Barton in 2011

Rehabilitation of the Woodglen Lake Dam auxiliary spillway was completed in December 2010. Rehabilitation of the Lake Barton dam auxiliary spillway was completed this summer.

Staff of the Stormwater Management Program and the Office of Emergency Management continues to work with police, fire and rescue and the 9-1-1 call center to develop training and drills to improve the flood detection and response plans.

Any development proposed within the mapped dam break inundation zone of state regulated dams must be identified on all preliminary plats, subdivision plans, site plans and minor site plan submissions.

A dam break inundation zone is the area downstream of a dam that would be inundated by the failure of the dam.

For [more information about dam safety](http://www.fairfaxcounty.gov/dpwes/dams/state.htm), visit www.fairfaxcounty.gov/dpwes/dams/state.htm.

Floodplain Development and Permit Requirements

Construction in a floodplain is not allowed under most circumstances:

- Before building, filling or excavating in a floodplain, or near any natural or man-made watercourse, call Fairfax County Land Development Services at 703-324-1720, TTY 711, to determine if the proposed activity is allowed and what types of permits are required.
- Any construction or land disturbance within or adjacent to a natural or man-made watercourse also may require a wetland permit from the U.S. Army Corps of Engineers and the State of Virginia.
- An addition to an existing building that is located in a floodplain may be allowed if the building was constructed prior to Aug. 14, 1978, and the cost of the addition is less than 50 percent of the market value of the existing building, not including the land.
- New dwellings and additions constructed adjacent to a floodplain must be elevated 18 inches above the 100 year flood level and set back 15 feet from the edge of the floodplain.
- Existing buildings in floodplains that have been damaged by flood, fire or other casualty loss may be reconstructed.
- A dwelling damaged to the extent that the cost of repairs equals or exceeds 50 percent of the building's market value before it was damaged must meet the same requirements as a new building.
- In addition to county approval, no building or filling is allowed in a floodplain without an engineering analysis to ensure the project will not increase flood damage elsewhere.

Building outside of a floodplain is the best protection against flooding.

For more information call Land Development Services at 703-324-1720, TTY 711; or visit the [land use web page](http://www.fairfaxcounty.gov/living/landuse/) at www.fairfaxcounty.gov/living/landuse/.



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On the web:
[Flood Protection](http://www.fairfaxcounty.gov/dpwes/stormwater/floodinformation.htm): www.fairfaxcounty.gov/dpwes/stormwater/floodinformation.htm

[Stormwater](http://www.fairfaxcounty.gov/dpwes/stormwater): <http://www.fairfaxcounty.gov/dpwes/stormwater>

To request this information in an alternate format, call 703-324-5500, TTY 711.